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\*\*\* QRL (Version 1) \*\*\*
(A quick RLE graphics encoder/decoder for 2068/Spectrum)

QRL is for those who have modems and wish to decode or encode RLE files quickly. An RLE file is a run-length-encoded ASCII file that represents a picture of 256 X 192 resolution.

LOADING: CLEAR 65000 (or reset computer) then LOAD "" or LOAD "QRL"

QRL will autostart and load its 400 bytes of machine code, then display its menu. Press first letter of desired command.

MENU	DECODE	COPY
LOAD	ENCODE	WIPE
SAVE	INVERT	QUIT

Length of any RLE file in memory is shown below menu.

MENU Turns menu off/on. So does just pressing ENTER. Loads your choice: Screen or RLE File. LOAD Saves your choice: Program, Screen or RLE File. SAVE DECODE Translates RLE file into picture. ENCODE Translates picture into RLE file. Inverts each dot of picture. INVERT COPY Copies full picture to 2040 printer. Erases pixel-lines (1-192) from bottom of picture. WIPE OUIT Clears and stops. RUN to resume. Same for BREAK.

QRL turns menu off/on automatically when necessary. Commands may be given whether or not menu is visible. Most recent picture loaded/decoded is kept in screen buffer.

WIPE command is for erasing any unwanted junk from bottom of picture. TECH-DRAW for example leaves 19 pixel-lim, of junk.

INVERT is for experimenting with negative images.

When saving or loading a screen, QRL uses screen buffer rather than display file.

## \*\*\*\*\*\*\*\*\*\*\*\*\*\* MEMORY USAGE \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

30400	END 30399 30799	3689 400	DESCRIPTION QRL BASIC (about QRL machine-code	800 bytes free) (a few bytes free)
30800	36942		Screen buffer	(4 10% bytes free)
37000	65300		RLE File Buffer.	$(27, 71, 72, \dots, 7)$

NOTE: An RLE file could be over 49K long, for an extremely complex picture. The QRL RLE buffer will handle MOST pictures.